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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,587	10/27/2003	Myoung-Hoon Park	P2044US	3751

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DRINKER BIDDLE & REATH LLP
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CHICAGO, IL 60606

EXAMINER

SELBY, GEVELL V

ART UNIT	PAPER NUMBER
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2622

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10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/694,587

Applicant(s)

PARK, MYOUNG-HOON

Examiner

Gevell Selby

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 12, 13, 14, 15-19, and 22-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 12, 13, 14, 15-19, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda, US 7,154,547, in view of Hata, US 6,825,883.**

In regard to claim 12, Oda, US 7,154,547, discloses a digital camera comprising:

(a) an imaging photography unit (see figure 1, element 12) comprising a focusing lens (see figure 1, element 8), a focusing lens driving unit (see column 4, lines 27-42: it is implied the Oda reference comprises a focusing lens driving unit in order to control the axial position of the lens), and an image sensing unit (see figure 1, elements 8, 12, 16, and 18) with a light-receiving surface divided into a chromatic sensing element (see figure 13, elements r, G, and B) and an achromatic sensing element (see figure 13, elements CC), the image sensing unit outputting a digital image signal (see column 11, lines 1-36);

(b) a digital signal processor (see figure 1, element 20) the processes the digital image (see column 11, lines 39-50);

(c) a data storage unit (see figure 1, elements 21 and 30);

(d) an automatic focusing shutter that outputs an automatic focusing indication signal (see column 4, lines 27-51: it is implied the Oda reference comprises a shutter since it controls the shutter speed); and

(e) a brightness comparator (see figure 1, element 22) that compares the digital image signal received from the image sensing means with a predetermined reference brightness signal and outputs a comparison result in response to the automatic focusing indication signal (see column 12, lines 38-48);

(f) a region selector (see figure 1, element 20) that receives the digital image signal and outputs a chromatic digital image signal in response to the automatic focusing indication signal and selects either a chromatic or an achromatic image signal in response to the brightness comparison result (see column 12, lines 20-24 and 52-63).

The Oda reference does not disclose comprising (g) a focus signal generator in communication with an output of the selector, the focus signal generator analyzing high frequency components of the chromatic or achromatic image signal from the selector, calculating a focal value according to said high frequency components of the chromatic or achromatic image signal, and outputting the focus signal to the focusing lens driving unit to move the focusing lens to a focal location.

Hata, US 6,825,883, discloses a digital camera comprising a focus signal generator (see figure 2, elements 1081 and 1085) and in communication with an output of the selector, the focus signal generator analyzing high frequency components of the chromatic or achromatic image signal from the selector, calculating a focal value according to said high frequency components of the chromatic or achromatic image signal, and outputting the focus signal to the focusing lens driving unit to move the focusing lens to a focal location (see column 11, lines 29-51).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Oda, US 7,154,547, in view of Hata, US 6,825,883, to have a focus signal generator in communication with an output of the selector, the focus signal generator analyzing high frequency components of the chromatic or achromatic image signal from the selector, calculating a focal value according to said high frequency components of the chromatic or achromatic image signal, and outputting the focus signal to the focusing lens driving unit to move the focusing lens to a focal location, in order to reduce the time required for the auto-focus operation when there is only a small number of pixels in the image pickup device on recording..

In regard to claim 13, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda reference discloses further comprising a recording medium interface for inserting a recording medium (see figure 1, element 24 and column 4, lines 61-62).

In regard to claim 14, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 13. The Oda and Hata references do not disclose wherein the recording medium comprises a portable compact flash card, smart media, and memory stick.

The Official Notice taken in the previous office action stating that is well known in the art that a recording medium comprises a portable compact flash card, smart media, and memory stick, in order to be compatible with multiple devices to transfer image data via the medium for further processing or viewing is taken as prior art. Since the applicant has not timely traversed the old and well known statement, the above is now considered admitted prior art. See MPEP 2144.03 (c).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Oda, US 7,154,547, wherein the recording medium comprises a portable compact flash card, smart media, and memory stick, in order to be compatible with multiple devices to transfer image data via the medium for further processing or viewing.

In regard to claim 15, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda reference discloses further comprising a display unit (see column 11, lines 59-63).

In regard to claim 16, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 15. The Oda reference discloses wherein the display unit is a color LCD monitor (see column 11, lines 59-63).

In regard to claim 17, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda reference discloses wherein the data storage unit comprises a temporary storage unit (see figure 1, element 21) and a non-volatile storage unit (see figure 1, element 30).

In regard to claim 18, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda reference discloses wherein the image sensing unit comprises:

(a) a light-receiving surface having a plurality of pixel sensors arranged regularly on a two-dimensional region of a predetermined size (see figure 13, element 1200);

(b) a scanning electronic circuit that outputs an electric image signal of incident light contacting a plurality of pixel sensors that has undergone photoelectric conversion (see column 5, lines 30-39); and

(c) a color filter mosaic separated at a predetermined distance from the light-receiving surface in the direction of the incident light (see column 5, lines 27-29).

In regard to claim 19, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 18. The Oda reference discloses wherein the light-receiving surface comprises a chromatic sensing unit (see figure 2, element 204) for receiving chromatic light entering through the color filter mosaic (see column 5, lines 54-64) and an achromatic sensing unit for receiving direct incident achromatic light that has not passed through the color filter mosaic (see column 6, lines 37-43).

In regard to claim 22, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda reference discloses wherein the focusing lens driving unit moves the focusing lens within a predetermined range in response to the automatic focusing indication signal and fixes the location of the focusing lens in response to the focus signal (see column 4, lines 42-47).

In regard to claim 24, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda reference discloses wherein the light-receiving surface may be realized by a metal oxide semiconductor image sensor or a charged coupled device (see column 4, lines 9-12 and column 5, lines 36-39).

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oda, US 7,154,547, in view of Hata, US 6,825,883, as applied to claim 12 above, and further in view of Dinev et al., US 6,788,338.

In regard to claim 23, Oda, US 7,154,547, in view of Hata, US 6,825,883, discloses the digital camera of claim 12. The Oda and Hata references do not disclose wherein the chromatic sensing element and achromatic sensing element are controlled by separate control signals and output only photoelectrically converted chromatic and achromatic image signals through separate paths, respectively.

Dinev et al., US 6,788,338, discloses a digital camera wherein the chromatic sensing element (see figure 1, element 103) and achromatic sensing element (see figure 1, element 104) are controlled by separate control signals (see column 4, lines 42-45) and output only photoelectrically converted chromatic and achromatic image signals through separate paths, respectively (see column 4, lines 46-63 and figure 1).

It would have been obvious to one of ordinary skill in the art at the time of invention to have been motivated to modify Oda, US 7,154,547, in view of Hata, US 6,825,883, and further in view of Dinev et al., US 6,788,338, wherein the chromatic sensing element and achromatic sensing element are controlled by separate control signals and output only photoelectrically converted chromatic and achromatic image signals through separate paths, respectively, in order to capture high resolution images at a high frame rate.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 2622

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs



LIN YE
SUPERVISORY PATENT EXAMINER